REMARKS

(1-2) Claims 1-2, 4-7, 13-15, and 18-19 are rejected under 35 U.S.C. §103(a) as being obvious over Irie et al., US 6,769,281 (previously applied) in view of Irie et al., US 7,111,392 (newly cited).

Amended claim 1 recites a new feature, namely, "*detecting a longitudinal pressing force at a time* ***when at least a portion of the catalyst is within an enlarged-diameter portion of the outer cylindrical housing*** *while the pressing device is pressing the catalyst and the mat in the longitudinal direction into the outer cylindrical housing.*" This feature is illustrated in Fig. 5(b), which shows the upper portion of the catalyst 11 protruding into the conical enlarged-diameter member 30 while coupled to the load cell B via the Pressing Member A. The Specification states,

> [0087] Press-fitting of the catalyst 11 using this enlarged diameter member 30 is carried out by the following procedure. In this ... At first, as shown in FIG. 5(a), the enlarged diameter member 30 is fitted onto the upper portion 13c of the outer cylindrical housing 13, and the catalyst 11 having been wrapped with the mat 12 is inserted ... into the enlarged diameter member 30. A pressing member A is then lowered toward the catalyst 11 that has been inserted into the enlarged diameter member 30, so that the bottom surface of the pressing member A closely contacts with the upper surface of the catalyst 11. And as shown in FIG. 5(b), the pressing member A is further lowered. By this operation, the catalyst 11 is further pressed and moved lower, and then the catalyst 11 is press-fitted inside the outer cylindrical housing 13. ...
> [0089] As shown in FIG. 5(b), provided above the pressing member A is a load cell B for detecting the pressing force of the pressing member A...

This rejection is respectfully traversed on, *inter alia*, two grounds:

First Ground. No such feature is disclosed by the Irie references. Irie '392 appears to illustrate an enlarged-diameter portion in Fig. 6, but such an appearance is specious. Irie states (column 9, line 29):

> Referring to FIG. 8 showing the process of producing the catalytic converter, at the outset, the shock absorbent mat 3 is wrapped around the catalyst substrate 2 at Step 101. And, these are ***loosely*** inserted into the cylindrical housing 4, at Step 102. Then, a first shrinking process is performed at Step 103, where the predetermined longitudinal part of the cylindrical ***housing 4 is compressed together with the shock absorbent mat 3, so as to reduce the diameter of the cylindrical housing 4*** ... until a reduced amount (d) equals a first reduced amount (S1) at Step 104, as a result of the first shrinking process at Step 103. In FIG. 4, the first reduced amount (S1) is a distance measured at a position "a" from the original position "0" in FIG. 4, which corresponds to the inner surface of the cylindrical housing 4 before the shrinking process is performed, and which can be measured by the radial moving distance of the split dies 21, on the basis of the detected hydraulic pressure of the hydraulic pressure actuating device (not shown) for actuating the pushing plate 24. Then, at Step 105, a first axial load (F1) is measured, when the axial load is applied to the catalyst substrate 2 so as to move it along the longitudinal axis of the cylindrical housing 4 by the axially moving distance (Sx) as shown in FIG. 3, e.g., 2 mm.

Irie then explains further (column 12, line 25):

> Referring back to FIG. 8, after the body portion of the cylindrical housing 4 ***with the catalyst substrate 2 and the shock absorbent mat 3 accommodated therein*** was reduced in diameter, the necking process is applied to the opposite ends of the cylindrical housing 4 by a spinning process at Step 111, according to the present embodiment. At the outset, the body portion (reduced diameter portion 4a as shown in FIG. 6) of the cylindrical housing 4 is clamped ... Then, the spinning process is applied to one end portion of the cylindrical housing 4 ... Accordingly, one end portion of the cylindrical housing 4 is reduced in diameter by the spinning rollers SP to provide a tapered portion 4b and a bottle neck

> portion 4c without any stepped portions formed between them, to form a smooth surface.

The other Irie reference, '281, also fails to disclose the feature.

Second Ground. The new reference, Irie '392, discloses a method of predicting friction between a catalyst substrate 2 and a cylindrical housing 4 (see Fig. 1), as a function of diameter reduction of the housing 4. (There is a mat 3 between the substrate 2 and the housing 4, so the friction actually involves friction between the mat 3 and the substrate 2, and between the mat 3 and the housing 4.)

The predicted friction Ft is termed a "target axial load" (column 10, line 6), and it is predicted on the basis of two measured friction forces F1 and F2, which are measured following two successive reductions S1, S2 in the diameter of the housing 4. This is shown in Fig. 4, where F1, F2, and Ft all lie on a line. Irie '392 states at col. 10, line 3,

> And, the program proceeds to Step 109 [in Fig. 8], where the target reduced amount (St) is provided for holding the catalyst substrate 2 in the cylindrical housing 4 by a predetermined target holding force, which corresponds to the target axial load (Ft), in accordance with the correlation property between the first and second reduced amounts (S1, S2) and the first and second axial loads (F1, F2). Then, at Step 110, the cylindrical housing 4 is sized to reduce its diameter, so as to provide the target reduced amount (St) which corresponds to the desired axial load (Ft) as shown in FIG. 4.

In the following paragraph, Irie '392 explains that the catalyst substrate 2 is moved 2 mm to find F1 and another 2 mm to find F2. Thus, the aim of Irie '392 is to predict the amount of compression of the housing 4 that will result in a predetermined axial friction force.

This is contrary to the Applicants' Claim 1, which recites *determining a diameter reduction of the outer cylindrical housing ... as a function of the longitudinal pressing force*. The reference predicts the friction as a function of the compression, while the Applicants predict an inverse of that.

Another difference is that Irie '392 does not disclose that there is any friction force when the catalyst substrate 2 is first inserted. Irie '392 repeatedly states that it is first inserted "loosely" (Abstract, line 11; col. 4, line 31; col. 6, line 63; col. 7, line 41; col. 9, line 32; col. 11, line 15). However, the Applicants' Claim 1 recites *detecting a longitudinal pressing force ... in the longitudinal direction into the outer cylindrical housing*, as discussed above, which is contrary to the initial loose insertion of Irie '392.

Thus, claim 1 is not anticipated by any combination of Irie '281 and Irie '392 (not admitted obvious). The dependent claims are patentable by their dependence from an allowable claim, as well as other grounds not set forth at present.

The Applicants' previous remarks are reiterated by reference.

In view of the above, allowance is requested.

Respectfully submitted,

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